Illinois Department of Transportation

Memorandum

To:	DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS
From:	Dianna L. Taylor Bureau Chief of Personnel Management
Subject:	Technical Vacancy
Date:	October 5, 2015

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement October 6, 2015 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Tuesday, October 20, 2015**. Applicants will not be accepted after that time and date.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Halie Zulauf or Denise Hamilton at 217/782-5594.

ET V	Nuclear Instrumentation Specialist Bureau of Materials & Physical Research Highways Springfield

Attachments
40580

Technical Applications (PM 1080) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) by **Tuesday, October 20, 2015**, 4:30 p.m. Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification:	**Engineering Technician V**	**Salary Range:**	**$5,015 - $9,155**
Position Title:	**Nuclear Instrumentation Specialist**	**Union Position:**	**☒ Yes ☐ No**
Position Number:	**PW015-23-50-702-33-02**	**IPR#:**	**40580**

Office/Central Bureau/District/Work Address:

Division of Highways/Bureau of Materials and Physical Research/128 E. Ash Street, Springfield, IL

Description Of Duties:

The incumbent is accountable for repair of earth deformation measuring devices, i.e. piezometers, settlement devices, inclinometers, and the operation and repair of geophysical equipment. S/He also maintains nuclear clean working conditions that are in compliance of the State of Illinois IEMA Division of Nuclear Safety Regulations, and Title 49 of the Code of Federal Regulations. S/He directs a safety program, especially to alert others that nuclear sources are in an area, and to ensure that personnel who operate the units are constantly made aware of the radiation dosages that they are being exposed to. S/He is also directs the disposal of nuclear waste in accordance with the regulations set by the Environmental Protection Agency.

Special Qualifications:

The following criteria is required:

- Incumbent must be certified by the Federal Nuclear Regulatory Commission and the IEMA Division of Nuclear Safety
- Valid driver's license
- Travel on an as-needed basis

The following criteria is desired:

- Twelve years of engineering technician experience with two years of experience repairing and maintaining nuclear density gauges and other geophysical field testing apparatuses; and two years of experience with training or assisting with the training of others on how to use nuclear density gauges for field applications
- Two year associate's degree, certificate of completion, or equivalent with coursework in electronics and circuit boards
- Proficiency in computer applications such as spreadsheets and word processing
- Experience in dealing and complying with state and/or national nuclear regulatory agencies
- Ability to organize equipment and maintenance schedules as to not unduly delay construction projects in the field
- Strong oral and written communication skills

Shift/Remarks:

8:00 a.m. – 4:30 p.m. / Monday – Friday

****THIS POSITION REQUIRES 24 HOUR CALL AVAILABILITY FOR EMERGENCY ASSISTANCE.***

***THIS POSITION IS COVERED UNDER THE REVOLVING DOOR PROHIBITION (RDP) POLICY.**

ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION

DATE:	July 1, 2015	**POSITION:**	Nuclear Instrumentation Specialist
APPROVED BY:	*Laura Mlacnik*	**OFFICE/DIVISION:**	Highways/Bureau of Materials and Physical Research
CODE:	PW015-23-50-702-33-02	**REPORTS TO:**	Geotechnical Engineer

Position Purpose

This position is accountable for the installation, implementation, maintenance and repair of nuclear density gauges and similar devices.

Dimensions

Number of Testing Units	
• Nuclear Gages	170
• Seismic Unit	1
• Resistivity Unit	1
• Slope Inclinometer	4
Value of Test Equipment	$1,000,000
Travel	$4,000
Personnel Supervised	1

Nature and Scope

This position reports to the Central Office Geotechnical Engineer as do the Soils Laboratory Supervisor, the Coordinator of Tests, and a Soils Field Engineer. Reporting to this position is one technician.

This position is unique in that it is the only one in the state where the incumbent is allowed to repair or calibrate the nuclear testing devices, other than the manufacturer. This is necessary because of the complexity and sophistication of the instruments, and the danger of overexposure from radiation. The technological aspects of this position require knowledge of mathematics, physics, and the technical expertise necessary to repair electronic and mechanical parts of the units. This position assures that the nuclear testing, geophysical, and earth deformation programs are thoroughly developed and guided so that there is an effective fulfillment and compliance with specifications and Project Procedures Guide. The holder of this position must be certified by the Federal Nuclear Regulatory Commission and the State of Illinois Emergency management Agency (IEMA) Division of Nuclear Safety.

The greatest challenges for the incumbent are solving compaction testing problems that arise with advent of new construction materials, problems that arise during routine construction, an the development of special techniques and procedures to solve all types of compaction problems related to the use of nuclear equipment. The incumbent is accountable for repair of earth deformation measuring devices, i.e. piezometers, settlement devices, inclinometers, and the operation and repair of geophysical equipment. S/He is also charged with the responsibility of maintaining nuclear clean working conditions that are in compliance of the State of Illinois IEMA Division of Nuclear Safety Regulations, and Title 49 of the Code of Federal Regulations. S/He is accountable for directing a safety program, especially to alert others that nuclear sources are in an area, and to assure that personnel who operate the units are constantly made aware of the radiation dosages that they are being exposed to. S/He is also accountable for directing the disposal of nuclear waste in accordance with the regulations set by the Environmental Protection Agency. The incumbent is available on call for advice and

emergency assistance to district personnel who operate the nuclear, earth deformation and geophysical units. S/He is charged with the prime accountability of calibrating the units both electronically and mechanically, and to prepare and update work manuals for the field personnel.

To perform these functions, the incumbent utilizes the services of a technician who aids in the performing of routine tests, and in the repair and maintenance of the testing equipment.

The incumbent's work is such that it must be performed with a minimum amount of direct supervision. S/He must plan, schedule, and conduct training programs, for state, county and municipal employees. Within the Department's established guidelines, the incumbent has the freedom to travel throughout the state to instruct, counsel, and solve problems of testing in the operation of the units. S/He also reviews and evaluates the use of equipment by others recommends procedural changes based on equipment modifications or research, and performs mathematical calculations necessary to reduce data to meaningful terms. The incumbent has the responsibility of purchasing supplies and services to maintain the Department's equipment in a safe working order.

The incumbent works closely with the Radiation Safety Officers of the Department to assure that all Department personnel and the public are continuously made aware of radiological safety and health regulations. S/He is accountable for maintaining positive working relations with district personnel who operate the units, with Radiation Officers of each district, and federal and state government agencies which are concerned with proper handling, storage and disposal of nuclear materials.

The effectiveness of the incumbent is measured by the ability to coordinate, administer, and motivate all implicated processes in maintaining optimum utilization of rapid nondestructive field testing.

Principal Accountabilities

1. Provides calibration, preventative maintenance, and repair of all devices to maintain optimum utilization of rapid nondestructive testing.
2. Compiles and analyzes technical data that will assist in establishing operating and safety policies for use throughout the state.
3. Develops training programs and trains new personnel who will use the testing devices to ensure their safety and the safety of the public.
4. Conducts evaluation and standardization procedures for various types and models of nuclear moisture-density gages to ensure their proper use.
5. Collaborates with district personnel and various government agencies to ensure compliance of department specifications and environmental policies.
6. Conducts research on new testing procedures and on new repair techniques that will produce speedy results and less costly maintenance repairs.
7. Trains, motivates and evaluates subordinate to ensure a well-developed and competent staff.
8. Ensures subordinate compliance will all departmental safety rules, practices and procedures.
9. Travels on an as-needed basis to perform the duties of this position.
10. Is on call for advice and emergency assistance to district personnel who operate the nuclear equipment.
11. Performs duties in compliance with departmental safety rules.
12. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
13. Performs other duties as assigned.